


Part 14

Docket No.: WRA-32830



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Date: April 22, 2003

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
Before the Board of Patent Appeals and Interferences

Applicant : Karl Draganitsch et al.
Applic. No. : 09/817,573
Filed : March 26, 2001
Title : Method of Producing a Wafer Product, Assembly for
Implementing the Method, and Wafer Product Produced
According to the Method
Examiner : Thuy Tran Lien - Art Unit: 1761

BRIEF ON APPEAL

Hon. Commissioner of Patents and Trademarks,
Washington, D. C. 20231,

Sir:

This is an appeal from the final rejection in the Office action dated January 23, 2003, finally rejecting claims 1-6.

Appellants submit this *Brief on Appeal* in triplicate, including payment in the amount of \$320.00 to cover the fee for filing the *Brief on Appeal*.

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Real Party in Interest:

This application is assigned to Master Foods Austria Gesellschaft mbH, a limited liability company of Austria, and a Division of Mars U.K. Limited, of Great Britain. The assignment will be submitted for recordation upon the termination of this appeal.

Related Appeals and Interferences:

No related appeals or interference proceedings are currently pending which would directly affect or be directly affected by or have a bearing on the Board's decision in this appeal.

Status of Claims:

Claims 1-6 are rejected and are under appeal. Claims 7-13 are withdrawn from further consideration.

Status of Amendments:

Claims 1 and 6 were amended after the final Office action. *An amendment under 37 CFR § 1.116* was filed on March 28, 2003. The Primary Examiner stated in an *Advisory Action* dated April 9, 2003, that the amendment after final would be entered upon the filing of a *Notice of Appeal*.

Summary of the Invention:

As stated in the first paragraph on page 1 of the specification of the instant application, the invention relates to a method of producing a wafer product containing a food product using at least two wafer sheets, furthermore a unit for

producing such a wafer product, and finally a wafer product produced according to this process. The elected claims which form the basis for this appeal are directed to the method of producing multilayer wafer products.

Appellants explained on page 8 of the specification, line 24, that Fig. 1 of the specification illustrates a unit for producing a wafer sheet. The unit is comprised of a first workstation formed by an automatically controlled baking oven 1 for producing wafer sheets 10 and 20; furthermore of a second workstation 2 in which a food product 30 is applied to a second wafer sheet 20 in each case; of a third workstation 3 in which the two wafer sheets 10 and 20 are placed one on top of the other; of a fourth workstation 4 in which the two superimposed wafer sheets 40 are pressed together; and of a fifth workstation 5 in which the wafer sheets that have been pressed together and have possibly been shaped are separated into individual products 60. Conveyor belts 25 and 45 are assigned to workstations 2, 3, 4 and 5.

As further stated on page 9 of the specification, the automatically controlled baking oven 1, through an output opening 11, successively feeds first and second wafer sheets 10 and 20 to the conveyor belt 25 assigned to the second workstation 2 and the third workstation 3. The respective first wafer sheet 10 of a pair of wafer sheets 10 and 20 is transported by the conveyor belt 25 underneath a dosing device 22 or metering device through to the third workstation 3. The latter is a lifting device, where the sheet is lifted, for example, by means of suction cups 32 whose height can be adjusted by an actuator 33. At the same time, the respective second wafer sheet 20 is transported underneath the dosing device 22, which coats it with a food

product 30, e.g. a confection, meat product, fish product, cheese product, fruit product, vegetable product or the like, or with nuts or almonds.

Appellants outlined on page 10 of the specification, line 9, that, subsequently, the conveyor belt 25 transports the second wafer sheet 20 coated with the food product 30 underneath the first wafer sheet 10, which is located in the lifting device 3. Then the first wafer sheet 10 is placed on top of the second wafer sheet 20 that is coated with the food product 30. Reference is had, at this point, to the illustration in Fig. 4.

As set forth on page 10 of the specification, line 17, the conveyor belt 25 then feeds the wafer sheet 40 (the two wafer sheets 10 + 20) and the intermediate layer of a food product 30 to the further conveyor belt 45. The latter then transports the wafer sheet 40 to the fourth workstation 4 formed by a unit for pressing the wafer sheet 40.

With reference to the bottom paragraph on page 10 of the specification, the press device 4 comprises a first profiled press plate 41 and an associated second press plate 42 of a diametrically opposed profile, between which the wafer sheet 40 is located (Fig. 5). By lowering the second press plate 42 by means of an actuator 43, the wafer sheet 40 is formed in accordance with the design of the two press plates 41 and 42 and is given, for example, a cup shape. Subsequently, the wafer sheets 50 thus shaped are fed to the fifth workstation 5 depicted in Fig. 6, which is formed by a stamping device. The stamping device 5 comprises a base plate 51, on which wafer sheets 50 are supported, and associated stamping tools 52, which can be moved up and down by an actuator 53. With this stamping device 5 cup-shaped wafer elements 60 are stamped out of the shaped wafer sheets 50, which

are discharged by a further conveyor belt 55. These wafer elements 60 can subsequently be filled with a further food product, e.g. with a chocolate cream, sealed by another wafer sheet and coated, for example, with a chocolate layer. According to a variant embodiment, the stamping device 5 merely produces predetermined breaking points in wafer element 40 so that the individual wafer elements 60 can be separated from each other by severing in a subsequent step.

Variations of the fourth workstation are illustrated in Figs. 5a and 5b. Fig. 5a depicts a press device in which the press plates 41a and 42a are flat. Fig. 5b shows a shaping device formed by a hollow body 41b with a profile on one side, the profiled surface of which is provided with suction openings 46 that are adjoined by a suction port 47. The wafer sheet 40 can be aspirated onto this hollow body 41b, which causes it to be likewise profiled.

As outlined on page 12 of the specification, line 4, to ensure that the wafer sheets 10 and 20 in every case retain the elasticity required for shaping for a short time after the baking process, the wafer batter must have a sugar content of at least 23%. Instead of sugar, a substitute with the technological properties of sugar may be used. Trehalose is preferably used for this purpose. It is important for the wafer sheets in the warm state to have sufficiently high elasticity that they can be shaped in the warm state after the baking process. To keep the wafer sheets at the required high temperature, all workstations are located within a sealed enclosure, which is preferably pressurized with hot air. After the shaping process, the products can be cooled, e.g. by supplying cold air.

Appellants outlined in the last paragraph on page 12 of the specification, line 18, that it is possible, with this process, to produce stacked wafer sheets of any taste category, which can be used to produce any type of wafer products. Since the process renders it possible to produce wafer sheets of any shape from flat wafer sheets using different press molds without requiring different baking molds, a wide variety of differently shaped wafer products can be produced at little extra cost.

As set forth on page 13 of the specification, line 1, it will be readily understood that, analogously, more than two wafer sheets with interposed layers of food products can also be pressed together and shaped if applicable.

References Cited:

U.S. Patent No. 2,888,887 (Wolf), dated June 2, 1959;

U.S. Patent No. 5,709,898 (Biggs et al.), dated January 20, 1998.

U.S. Patent No. 4,518,617 (Haas, Sr. et al.), date May 21, 1985.

Issues

1. Whether or not claims 1-3, 5, and 6 are obvious over Wolf in view of Biggs, et al. under 35 U.S.C. §103.
2. Whether or not claim 4 is obvious over the combined teachings of Wolf, Biggs, et al., and Haas, Sr., et al. under 35 U.S.C. §103.

Grouping of Claims:

Claim 1 is independent. Claims 2-6 depend from claim 1. Only the patentability of claim 1 will be argued. Therefore, claims 2-6 stand or fall with claim 1. This grouping is to be understood as an expeditious effort to further this appeal and to simplify the issues before the Board. Appellants herewith reserve their right to argue for the patentability of each of the dependent claims 2-6 and individual features defined therein.

Arguments:

In most general and sweeping terms, appellants agree with the Primary Examiner that it has been known in the pertinent art to (1) provide a malleable batter or dough, to (2) shape the dough while it is still in a malleable state (either in its highly viscous and liquid form or just prior to final and complete baking – see, e.g., Biggs, et al.), and after complete baking, i.e., when the dough can no longer be shaped, to (3) layer or fill the wafer plate with fill product. Many variations of this process are available.

One variation which is not available from the prior art is claimed herein, namely: (1) a first sheet is baked; (2) food product is placed on the first sheet; (3) a second sheet is baked and placed on the layered first sheet; and (4) the sandwich of the first layer + food product + second layer is subsequently shaped.

The advantages, as described in the specification, is that the production process includes baking in a simple strip process without providing complicated and small batch production molds inside the baking chamber. Instead, it is now possible to

form the product into shape after the wafer strips have left the baking chamber and after the wafers and the food product have been layered into a substantially finished product.

The primary reference Wolf deals with the production of closed filled wafer strips. Wolf's contribution to the art was in that he proposed a production in which standard shaped wafer sheets were placed on top of one another such that the abutment seams would not align with one another and such that a substantially continuous layer sandwich would be produced that could be cut in any shape.

Wolf's problem was that

the possibility of carrying these suggestions into practice depends on the answer to the question whether the wafer strips thus produced are actually of a truly uniform thickness, whether said strips can be cooled down without more than a minimum number of cracks being formed in them, and whether it is possible, upon the occurrence of shrinkage cracks which cannot be completely avoided in practice, to prevent those portions of a wafer strip between which a crack has formed from being pushed one on top of the other.

Wolf, col. 1, lines 40 - 50.

With the sheets abutting one another in a planar layer, the sheets were coated and care was taken not to disturb the proper abutment of the individual sheets. As explained by Wolf, it was important that

the joints between adjacent sheets or panels in the upper wafer layer should be off-set both longitudinally and transversely or at least either longitudinally or transversely in relation to the points between the sections of panels in the lower wafer layer.

Wolf, col. 2, lines 31 to 36.

The filling material (food product in our claims) served to establish a bond between the layers and the adhesion provided by the filling material was sufficient to retain the wafer sheets on one another. At that point, the wafer layers or the wafer sandwich was subjected to cutting.

In order to provide uniform thickness and a carefully shaped product, Wolf explained that

Under certain circumstances it may, of course, be necessary or desirable to equalize the thickness of the filled wafer strip by suitable pressing means in the form, for example, of rollers or belts, this equalizing action also tending uniformly to distribute the filling material between the wafer layers.

Wolf, col. 2, lines 46 to 51.

The instantly claimed invention provides for a similar process in which wafer sheets are baked, they are transported out of the baking oven, they are layered and provided with a food product (filling material in Wolf), and then they are (1) compressed and (2) shaped. Subsequently, as recited in claims 4 and 5, the larger sheets are cut into individual food products.

The Primary Examiner has apparently read the "rolling" disclosed by Wolf on the pressing and shaping steps recited in claim 1. While the analogy or the similarity is appreciated, there exists a quite considerable difference between the rolling or other pressing provided by Wolf and the claimed separate steps provided by applicants. In light of the fact that the claims have been revised to emphasize the separate processing intended by "compressing" and "shaping," it is believed that Wolf has been removed in this regard. Wolf's rolling is at most a pressing action

which is provided to smooth the layer sandwich and to equalize the distribution and the thickness of the food product inside the wafers. It is highly unlikely that the wafer sheets themselves are "shaped" (in the sense of appellants' claims) during the rolling action because the wafer sheets have already been baked and, since the sugar content is likely very low in the context of Wolf, these wafer sheets are rather brittle and can no longer be shaped. The fact that the rolling of Wolf is effected while the product is still at an elevated temperature is to assure that the food product -- such as malleable chocolate or the like -- can be properly distributed.

In the exemplary embodiment, Wolf explained that the

filled wafer strip thus produced is passed under an equalizing roll 4 which compresses the entire strip to the desired final thickness while at the same time distributing the filling material over the entire wafer surface.

Wolf, col. 3, lines 17-21.

This brings us to the secondary reference Biggs et al., where it is explained that the sugar content defines the malleability of the wafer sheets. While it would be possible, technologically, to combine Wolf with Biggs et al., it would appear that a rolling of a still malleable wafer sheet (the wafer sheet of Wolf would be soft at a sugar content as provided by Biggs et al.) would lead to a compressed and hardened flat product which would be unacceptable as a confectionary food product. Wolf is only able to roll and distribute the inside food product because the wafer sheets are already baked and hard. In fact, were the wafer sheets soft and malleable, the food product would not be laterally distributed, but instead, pressed into the wafer sheet. Biggs et al. leave the wafer sheet soft so that it can be formed around the food product. In the example, Biggs et al. place a wafer batter onto a

heating plate 3 (at 200°C) for about 15 seconds before the plate is deformed to deform the wafer around an ice cream core 1.

The two references Wolf and Biggs et al., i.e. the teachings thereof, are rather incompatible in realistic terms, because the resulting food product would not be a proper such product.

The claims of the instant application define two separate steps which are not disclosed or even obvious from the references of record. There is nothing in the art of record which would suggest compressing a sandwich of wafer sheets and food product to form a preliminary stack and then to shape the preliminary stack into its final shape.

More specifically with regard to claim 1, appellants originally referred to the heated condition of the wafer sheets, as they emerge from the baking oven, as being in "the hot state." That terminology was changed to "elevated temperature." In response to the Primary Examiner's objection that "elevated" is but a relative term without a specific definitional reference within the claim, appellants imported language from the original specification which described the "warm" state as a parameter of the characteristic of malleability. That is, claim 1 defines the malleability of the wafer sheets following their presence in the baking chamber after baking and before shaping. At that point, the wafer sheets are elastic, they have a certain elasticity and they can be bent and pressed. On shaping, of course, the wafers will be plastic (in a macroscopic sense) and elastic (in a microscopic sense), so they allow shaping without compressing into a hard mass.

It is of primary importance in the instant application that the two or more wafer sheets are still malleable so as to enable the shaping by the mold press. This shaping is done, according to the invention of this application, after the baking of the sheets. The malleability -- defined in the application as "sufficient elasticity" to enable shaping -- lies at the heart of the invention. Here, we bake the batter into sheets, we layer the sheets with food product (e.g., chocolate, nuts, etc.), and we shape them into whatever form. Since the batter has a minimum sugar content of 23% (or equivalent trehalose content), the wafer sheets can still be shaped, even after they are baked.

The honorable Board is therefore respectfully urged to reverse the final rejection of the Primary Examiner.

Respectfully submitted,



For Appellants

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Appendix - Appealed Claims:

1. A method of producing a wafer product, which comprises:

outputting a first wafer sheet with a sugar content of at least 23% or an equivalent content of a sugar substitute from a baking oven;

applying a layer of a food product to the first wafer sheet;

providing a second wafer sheet with a sugar content of at least 23% or an equivalent content of a sugar substitute, and placing the second wafer sheet on the first wafer sheet; and

subsequently compressing the first and second wafer sheets and shaping the first and second wafer sheets containing the layer of the food product while the first and second wafer sheets are maintained in a warm state sufficient to have an elasticity enabling said first and second wafer sheets to be shaped.

2. The method according to claim 1, which comprises placing onto the first wafer sheet the food product selected from the group consisting of a confection, meat product, fish product, cheese product, fruit product, vegetable product, nuts, and almonds.

3. The method according to claim 1, wherein the sugar substitute is trehalose.

4. The method according to claim 1, which comprises cutting the pressed-together wafer sheets into individual hollow bodies and subsequently introducing a filling into the hollow bodies.

5. The method according to claim 1, which comprises, subsequent to the pressing step, cutting the shaped wafer product into individual wafer products and providing the individual wafer products with an outer coating.

6. The method according to claim 1, which comprises processing, together with the first and second wafer sheets, additional wafer sheets each in a warm state sufficient to have an elasticity enabling said wafer sheets to be shaped with interposed layers of food products.